



Clean Diesel Engine Implementation Workshop

**Operation & Maintenance Practices Panel Discussion
Misfueling Presentation**

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Misfueling Incentives

★ Unintentional Misfueling

- Mistake
- Contamination (higher than 15 ppm)
- No verification at the pump

★ Intentional Misfueling

- ULSD is unavailable (80/20 rule)
- Price savings (retailer or end user)
- Rental industry





ATA's Perspective Misfueling Problems

- ★ **Misfueling may cause problems with the emission control components**
- ★ **Consequences are not yet understood, because ECDs are not yet developed**
- ★ **There may be a difference between misfueling with 30 ppm sulfur and 500 ppm sulfur or splash blending 5000 ppm kerosene:**
 - One tank of slightly contaminated ULSD may compromise the performance of the catalyst for a period of time
 - One tank of highway fuel may destroy the NOx adsorber/ PM trap permanently.
- ★ **Misfueling falls on the shoulders of the end user**
 - Void the emissions control device warranty
 - Trucker pays, unless you can prove that misfueling was someone else's fault
- ★ **NOx adsorbers are likely to cost \$4,000 to \$5,000, making misfueling a very expensive mistake.**





Imperfect Solutions

- ★ **Truck / Fuel Tank Markings (as proposed)**
- ★ **Color-coded nozzles/scuffguards**
 - Could limit mistakes, but doesn't solve contamination or intentional misfueling
 - No standard colors – would require pump retrofits
- ★ **Unique size/shape/length nozzles and filler pipes**
 - Flow restrictions / productivity
 - Compatibility with existing fleet
 - Retrofit – all trucks and pumps
 - Redesign and test of all fuel tanks (\$\$\$)
- ★ **Electronic pump/vehicle interface (transponders)**
 - Not invented
 - Auto industry abandoned the idea with ethanol
 - Retrofit – all trucks and pumps





The Solution

★ ONE NATIONAL DIESEL FUEL STANDARD

